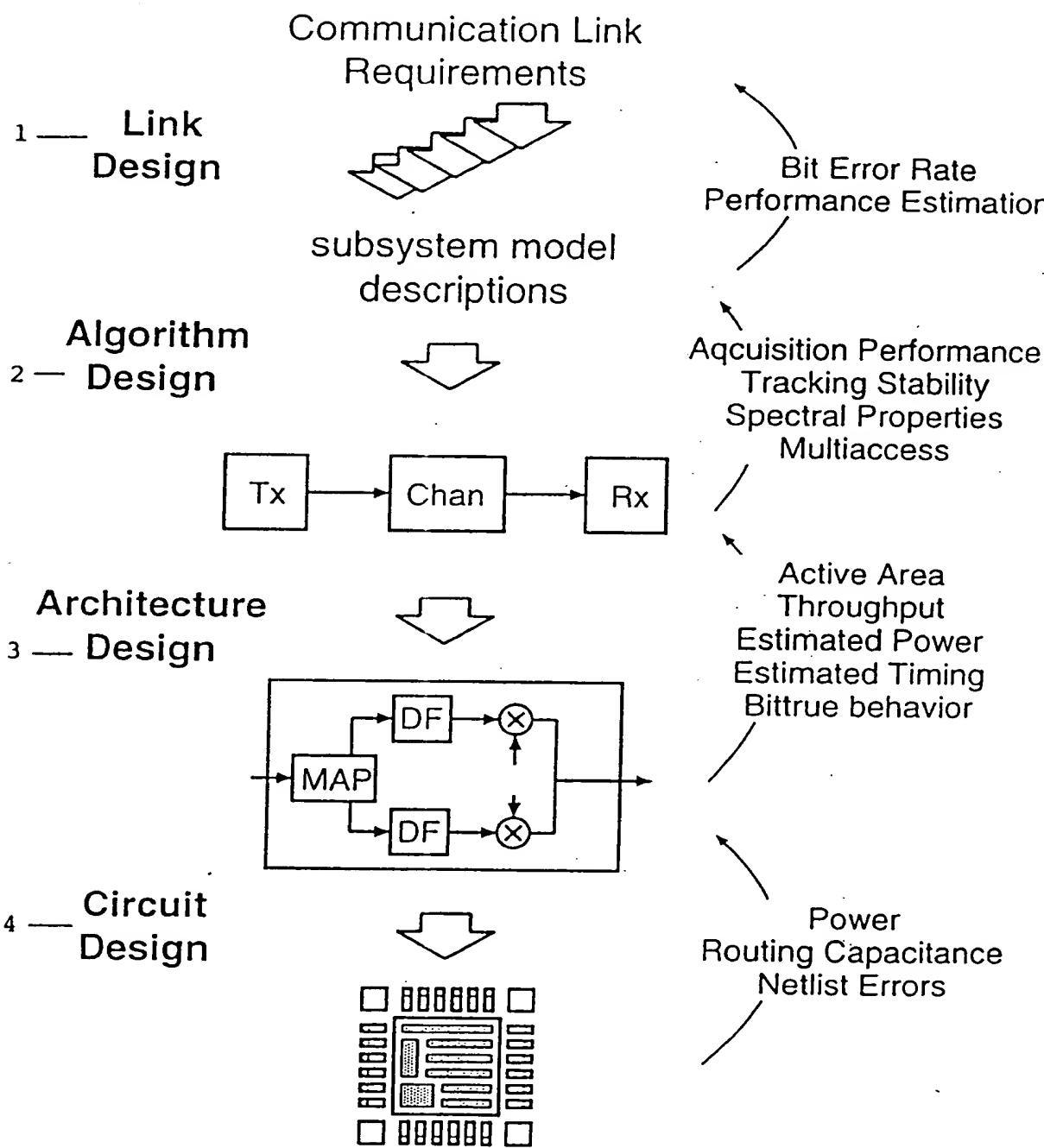


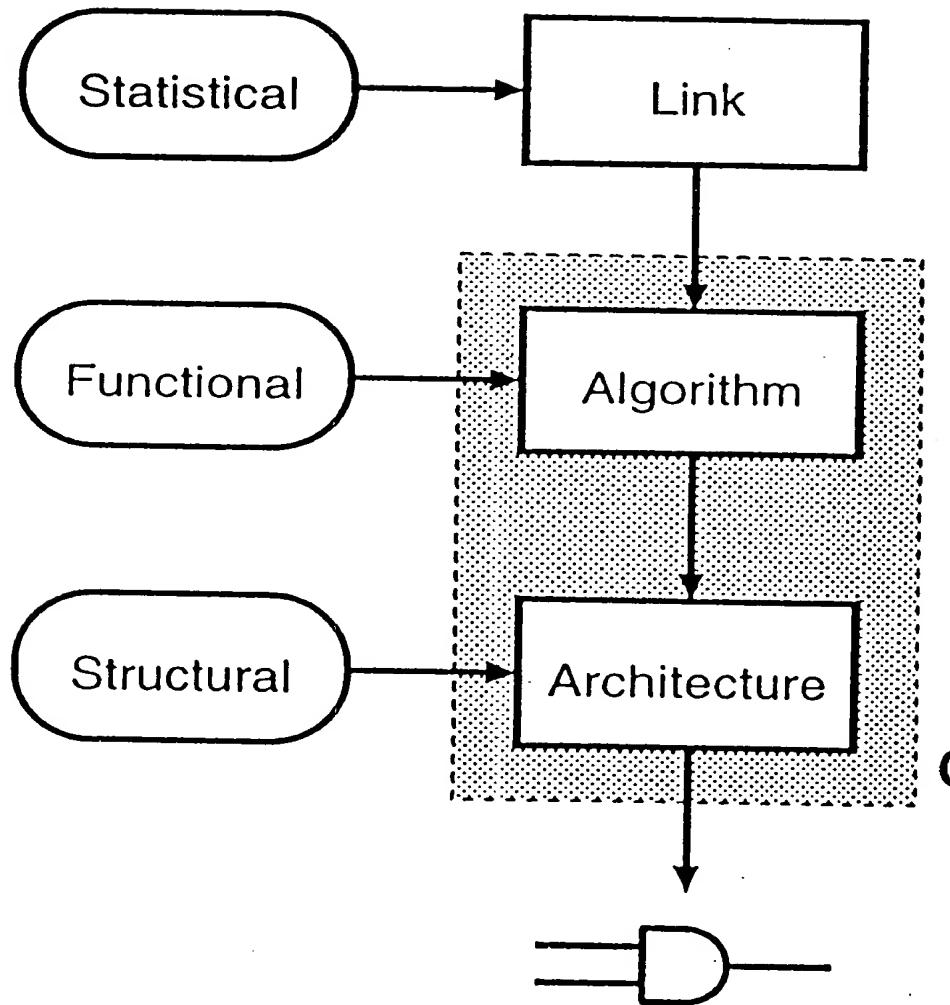


APPROVED	O.G. FIG.
BY	CLASS
DRAFTSMAN	SUBCLASS



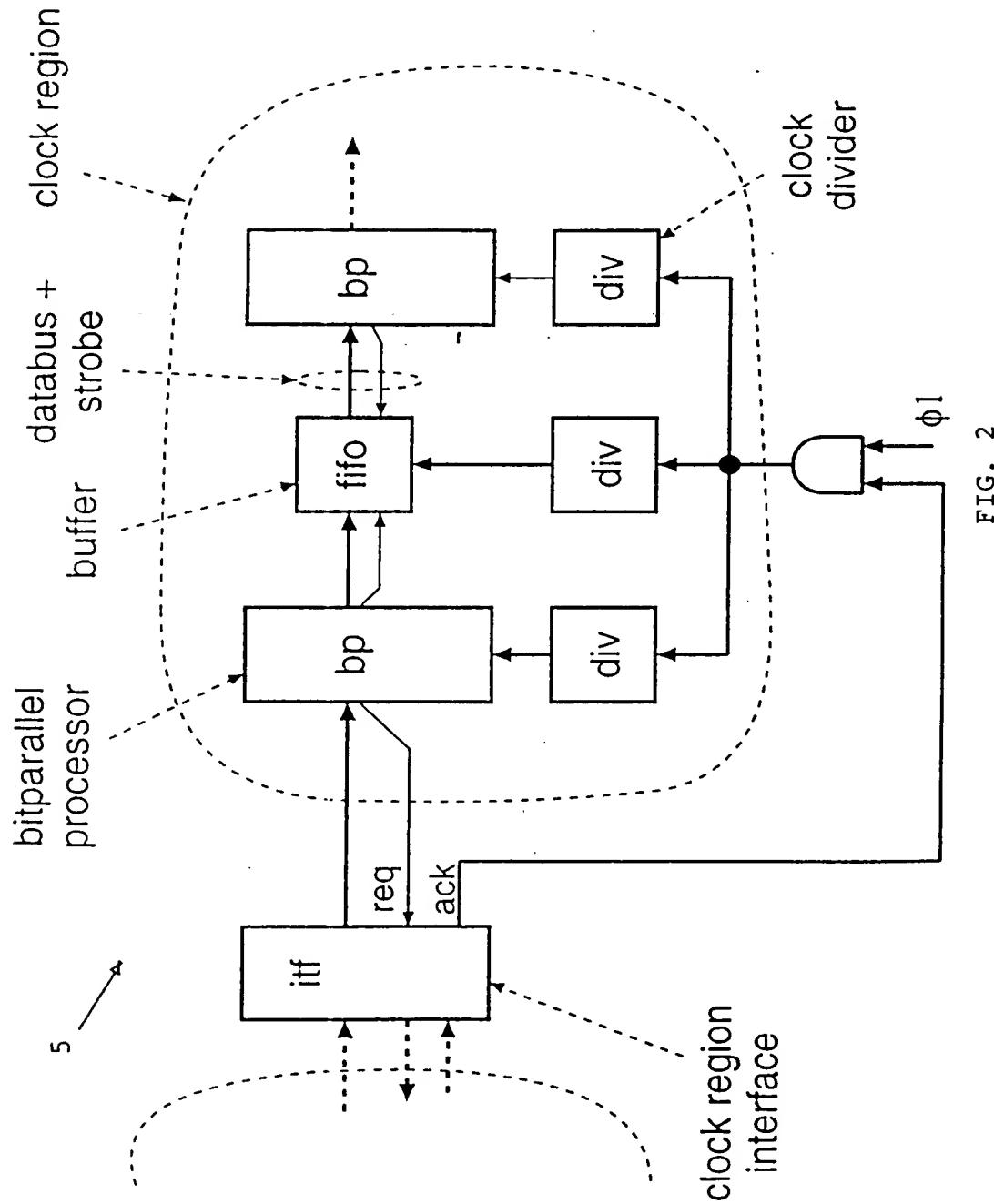
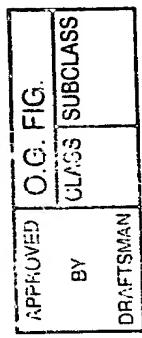


APPROVED	O.G. FIG.
	CLASS
BY	SUBCLASS
DRAFTSMAN	



Ocapi

FIG. 1B

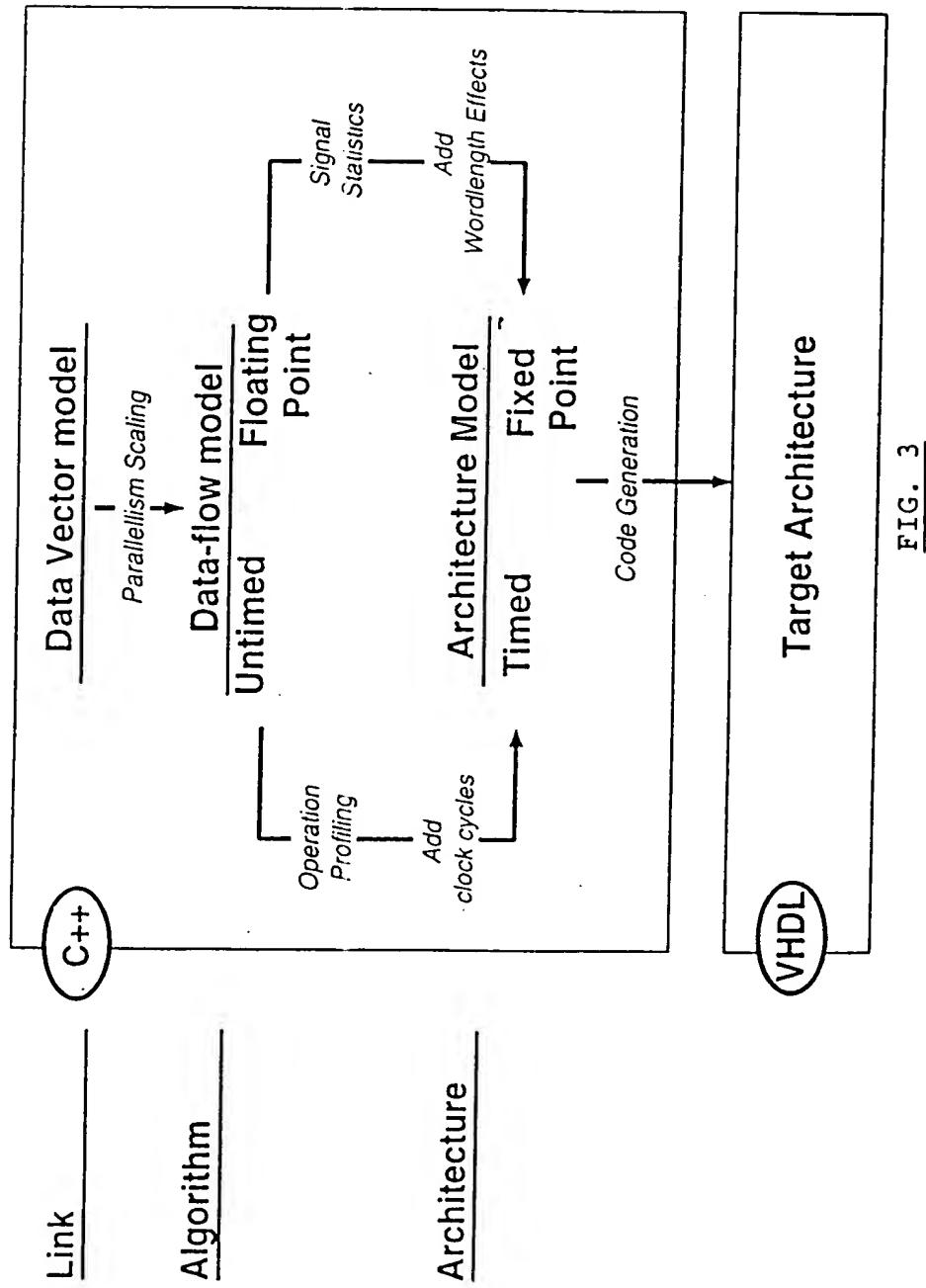




A DESIGN APPARATUS AND A METHOD FOR GENERATING AN IMPLEMENTABLE DESCRIPTION OF A DIGITAL SYSTEM 1983 .082302

Schaumont et al.
Appl. No.: 09/873,553 Atty Docket: IMEC65.1CP147

APPROVED	O. C. FIG.
BY	ULMUS SUBCLASS
	DRAFTSMAN





A DESIGN APPARATUS AND A METHOD FOR GENERATING AN IMPLEMENTABLE DESCRIPTION OF A DIGITAL SYSTEM, 022302
Schaumont et al.
Appl. No.: 09/873,553 Atty Docket: IMEC65.1CPTC1

SEARCHED	INDEXED	U.S.C. FIG.
BY	CLASS	SUBCLASS
DATE	SEARCHED	INDEXED

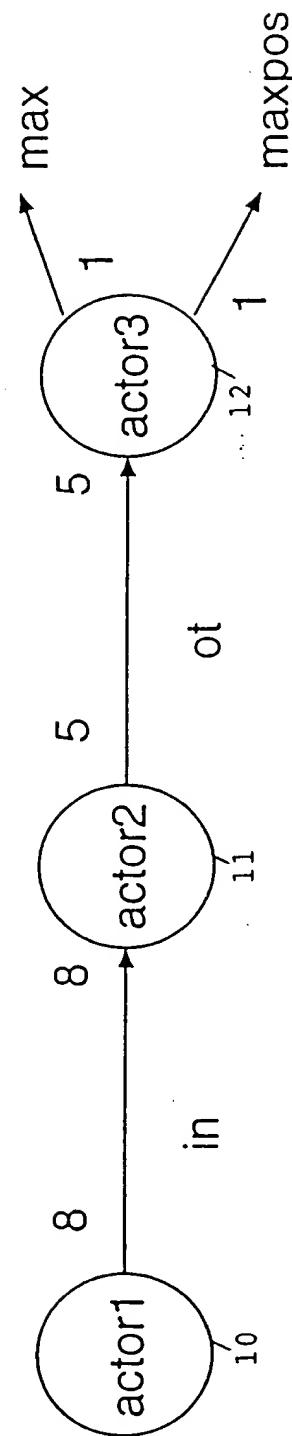


FIG. 4

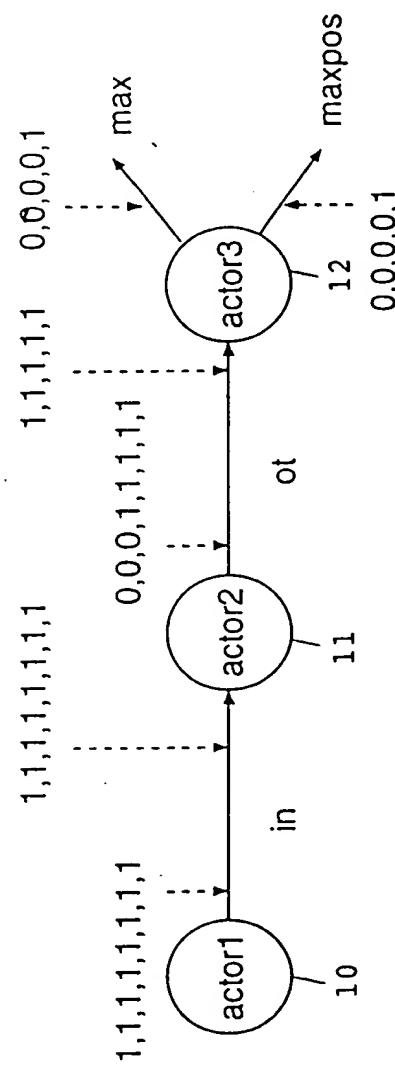


FIG. 5

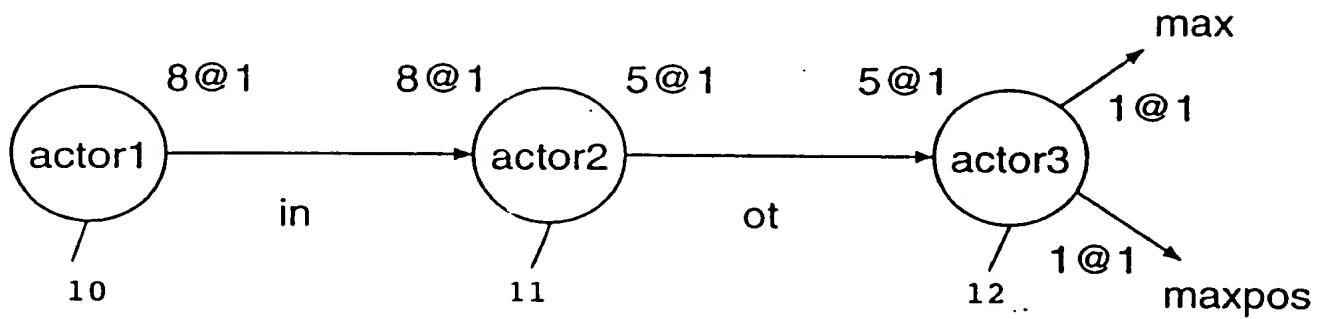
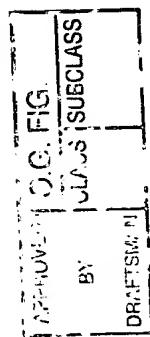


FIG. 6

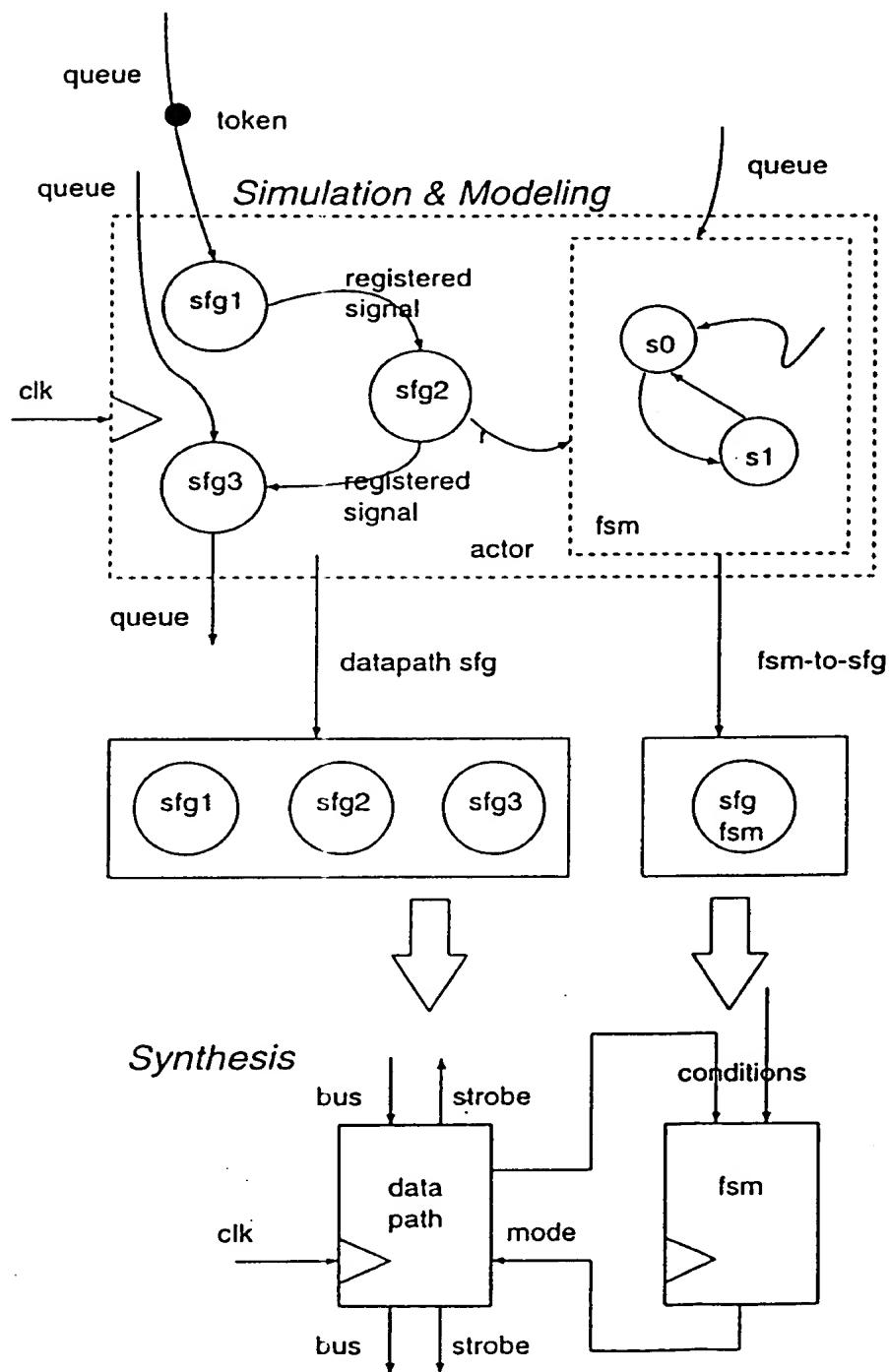
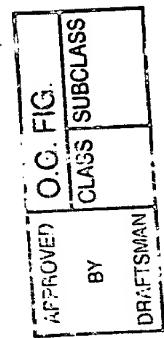


FIG. 7

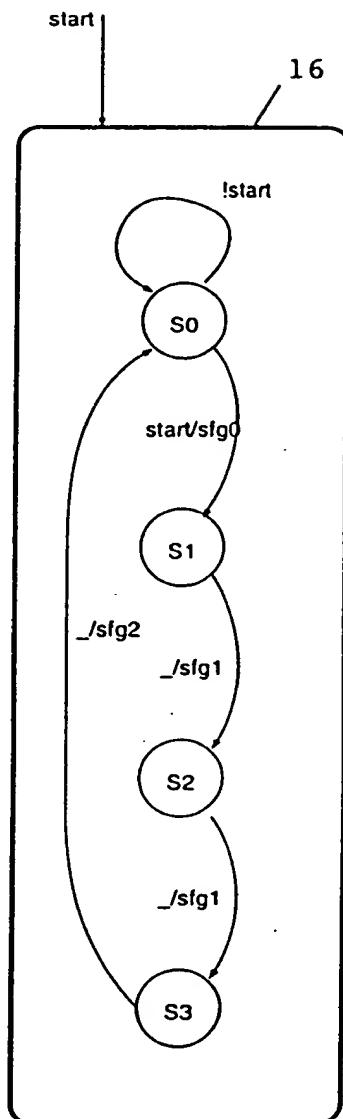
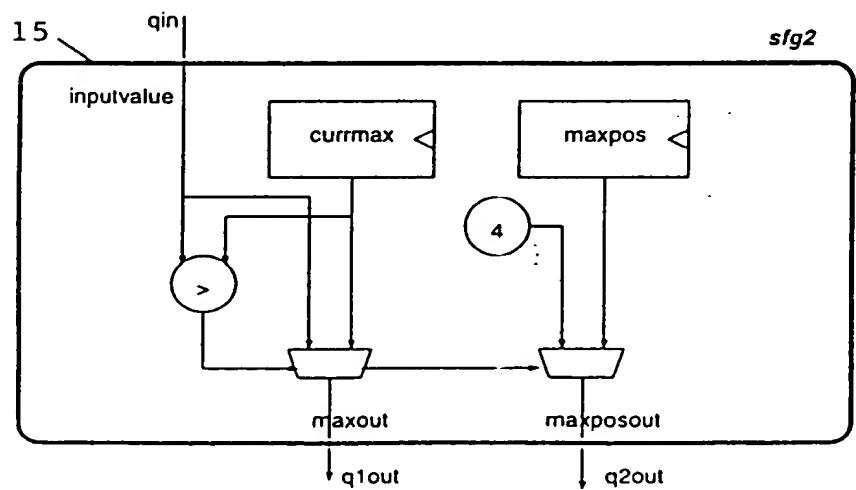
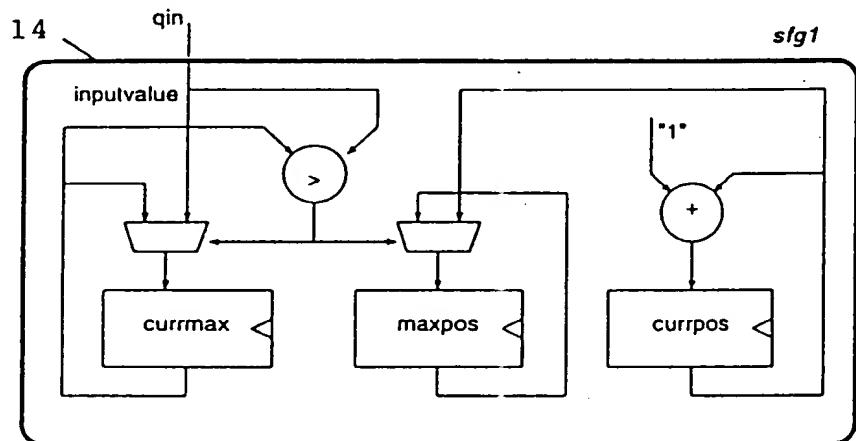
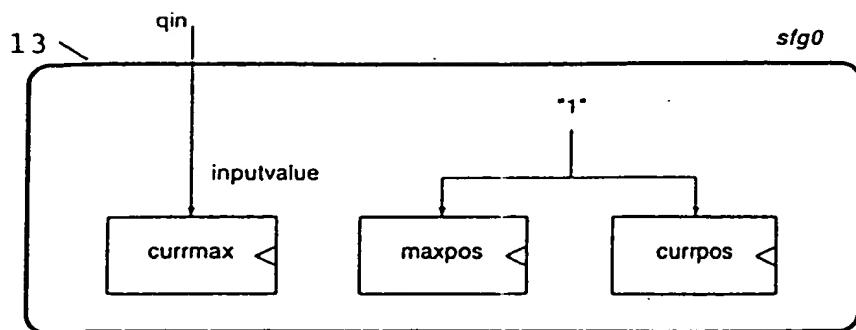
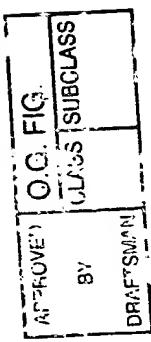
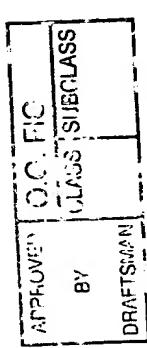
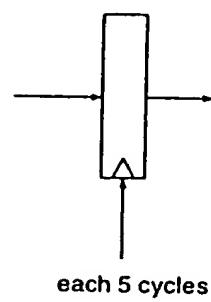


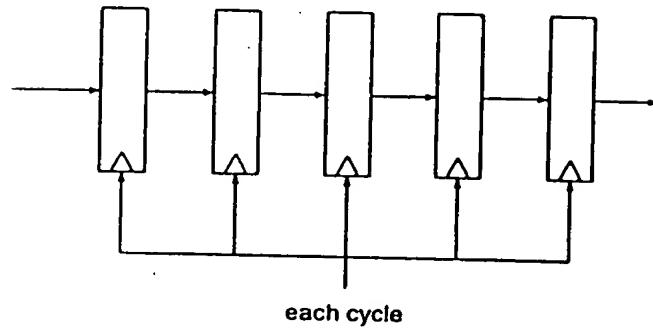
FIG. 8



travel delay = 5
token concurrency = 1
token latency = 5



travel delay = 5
token concurrency = 1
token latency = 1



travel delay = 5
token concurrency = 2
token latency = 1

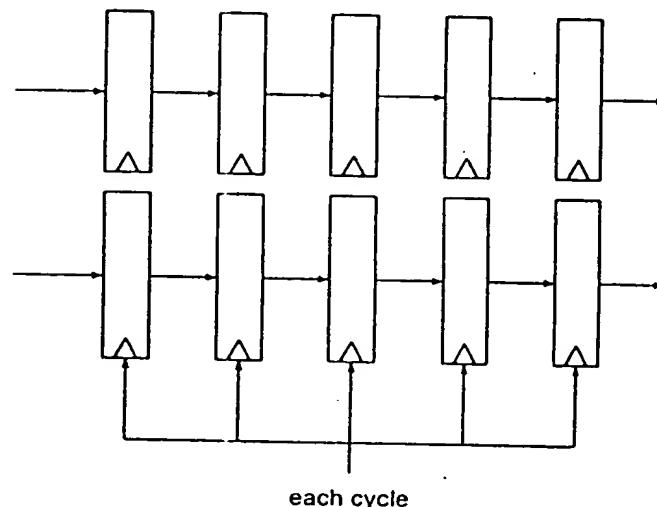


FIG. 9

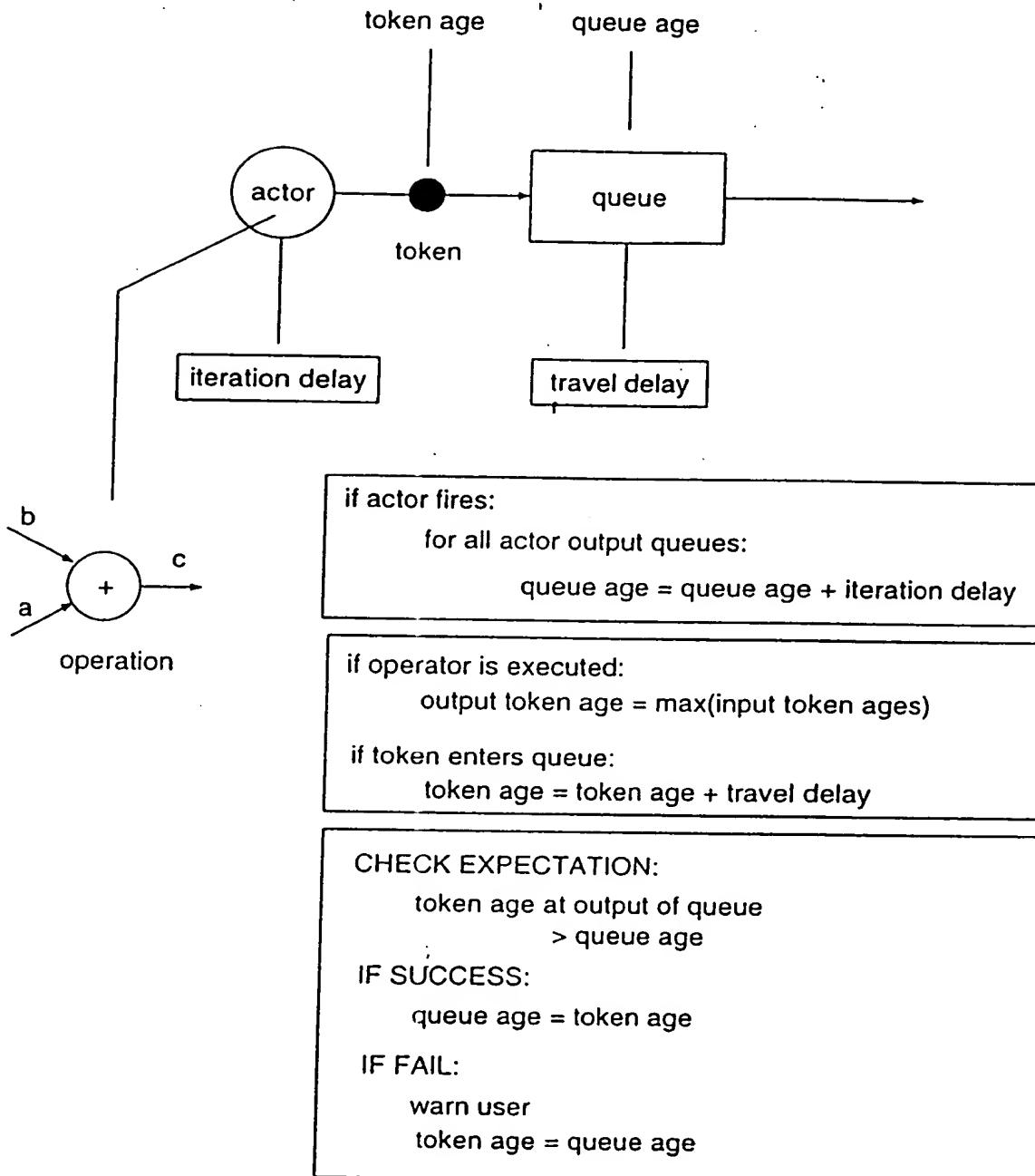
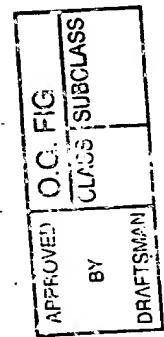


FIG. 10



```
dfix T_sample(8, 6);
dfix T_acc  (8, 6);
dfix T_bit   (1, 0, ns);
double hardwired_coef = { 0.5, 0.2, -0.3, 0.15 };

fsm correlator::define(clk # _ck)
{
    sig_array coef      (4, ck, T_sample);
    sig_array sample   (4, ck, T_sample);
    sig      accu      (ck, T_accu      );
    sig      sample_in (T_sample      );
    sig      coef_in   (T_sample      );
    sig      corr_out  (T_sample      );
    sig      load      (ck, T_bit      );
    sig      load_ctr  (T_bit       );

    sfg initialize_coefs;
    for (i = 0; i < 4; i++)
        coef[i] = W(T_sample, hardwired_coef[i] );

    sfg load_coef_0;
    input(coef_in);
    coef[0] = in_coef_in;

    sfg correl_1;
    accu    = cast(T_acc, coef[0] * sample[0] + coef[1] * sample[1]);

    sfg correl_2;
    corr    = accu + cast(T_acc, coef[2] * sample[2] + coef[3] * sample[3] );
    output(corr);

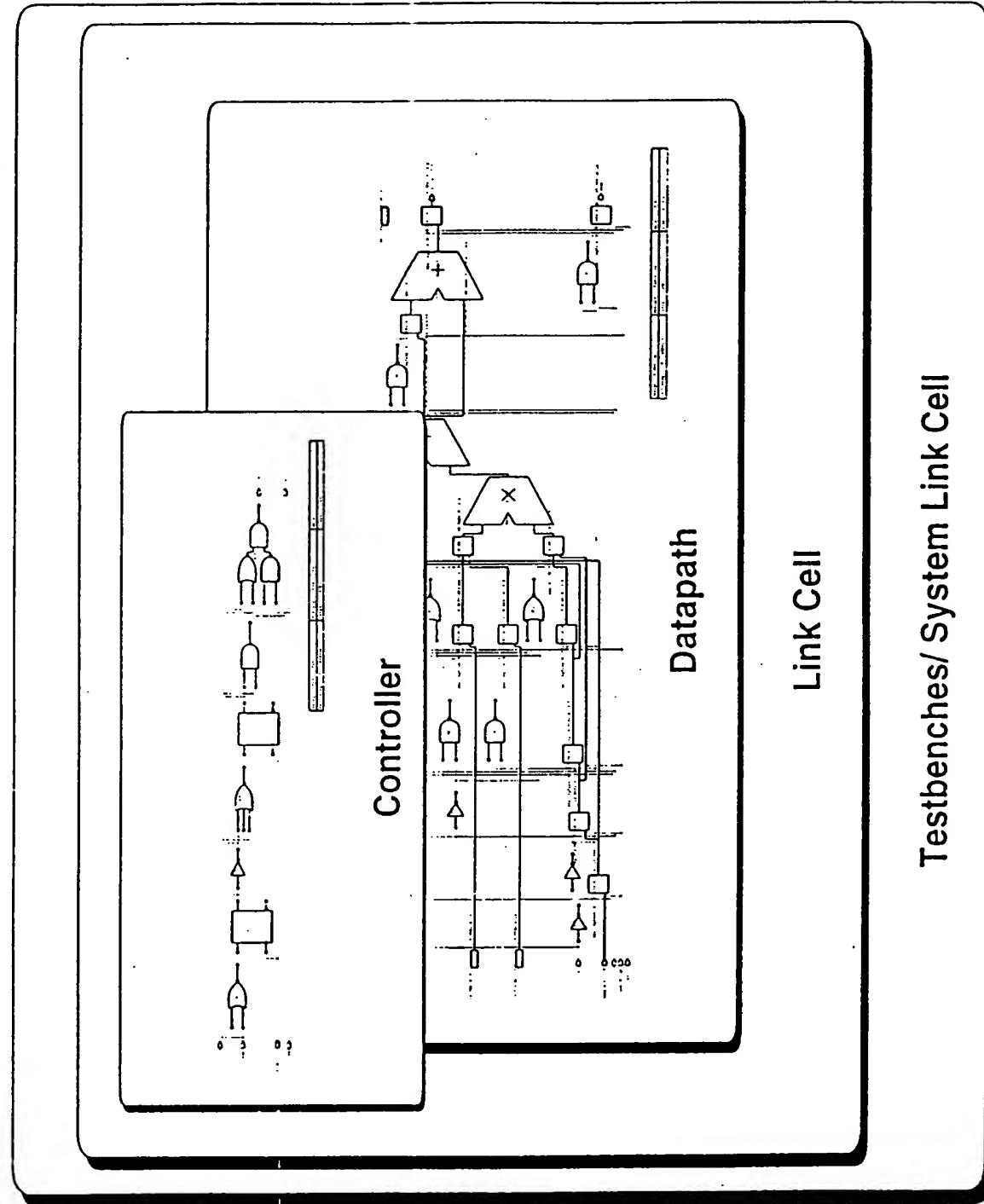
    sfg read_sample;
    input(sample_in);
    for (i = 3; i >=0; i--)
        if (i)
            sample[i] = sample[i-1];
        else
            sample[i] = sample_in;

    sfg read_control;
    input(load_ctr);
    load = load_ctr;

    fsm myfsm;
    initial rst;    ;
    state phase_1;
    state phase_2;
    rst    << always    << initialize_coefs    << phase1;
    phase1 << always    << read_control
                << correl_1           << phase2;
    phase2 << !cnd(load) << correl_2
                << read_sample        << phase1;
    phase2 << cnd(load) << correl_2
                << read_sample        << phase1;
                << load_coef_0        << phase1;
    return myfsm;
}
```



APPROVED	O.G. FIG.
BY	SUBCLASS
DRAFTSMAN	CLASS



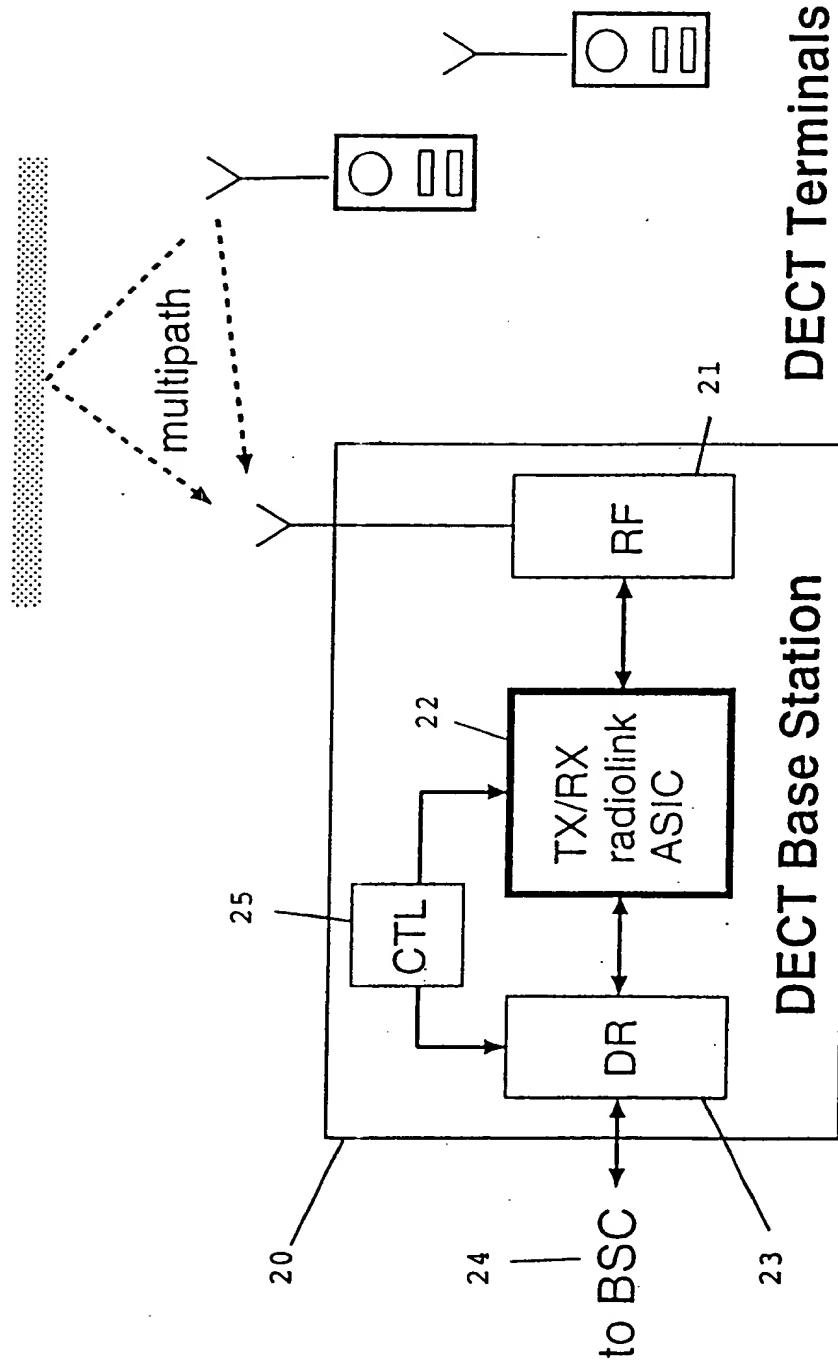
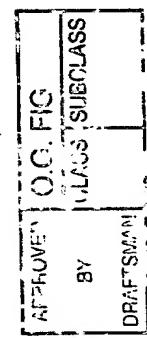


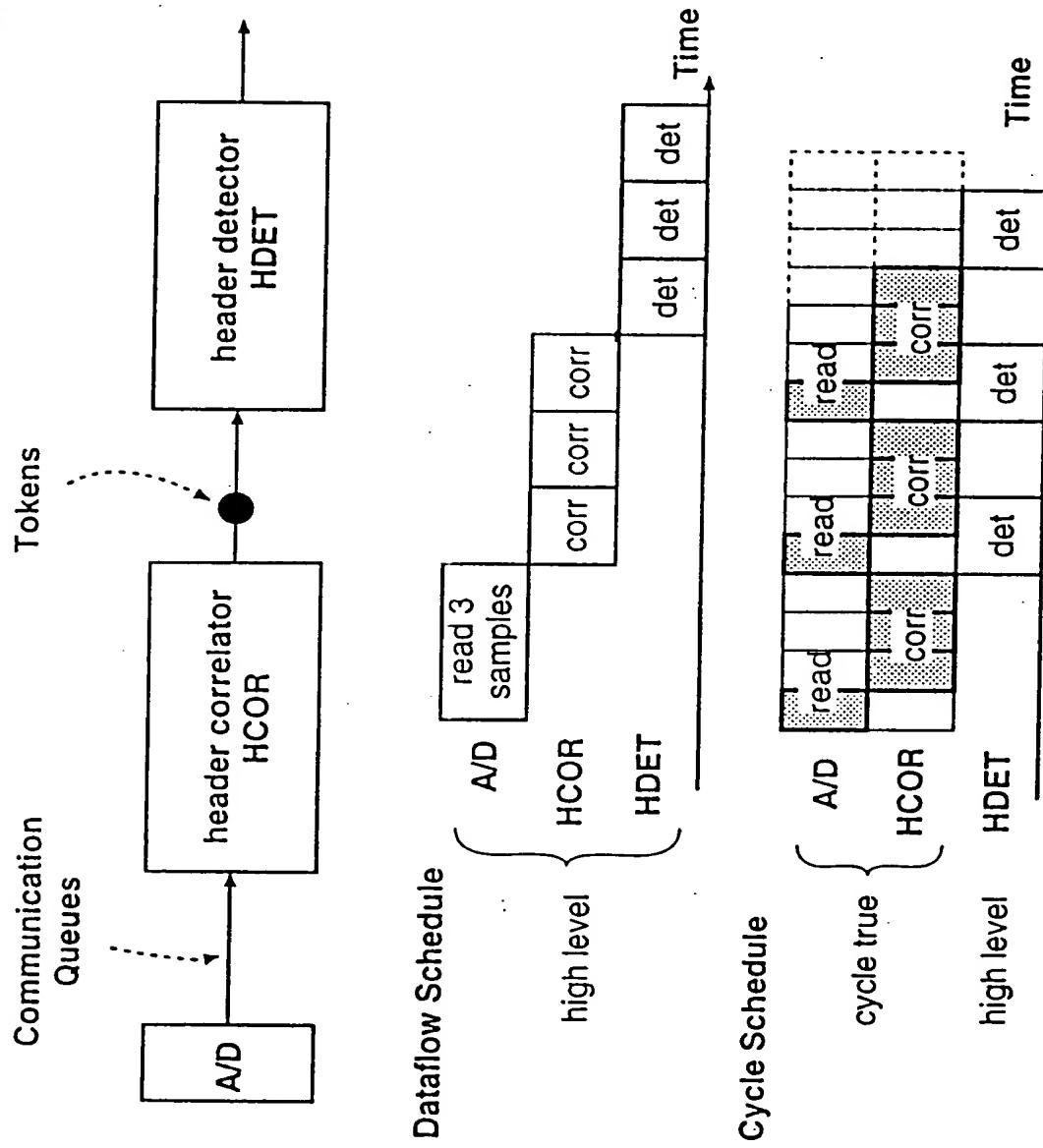
FIG. 13

DECT Terminals

DECT Base Station



APPROVED	O. G. FIG
BY	UL/MS SUBCLASS
DRAFTSMAN	





APPROVED	O.G. FIG.
ULAS	SUBCLASS
BY DRAFTSMAN	

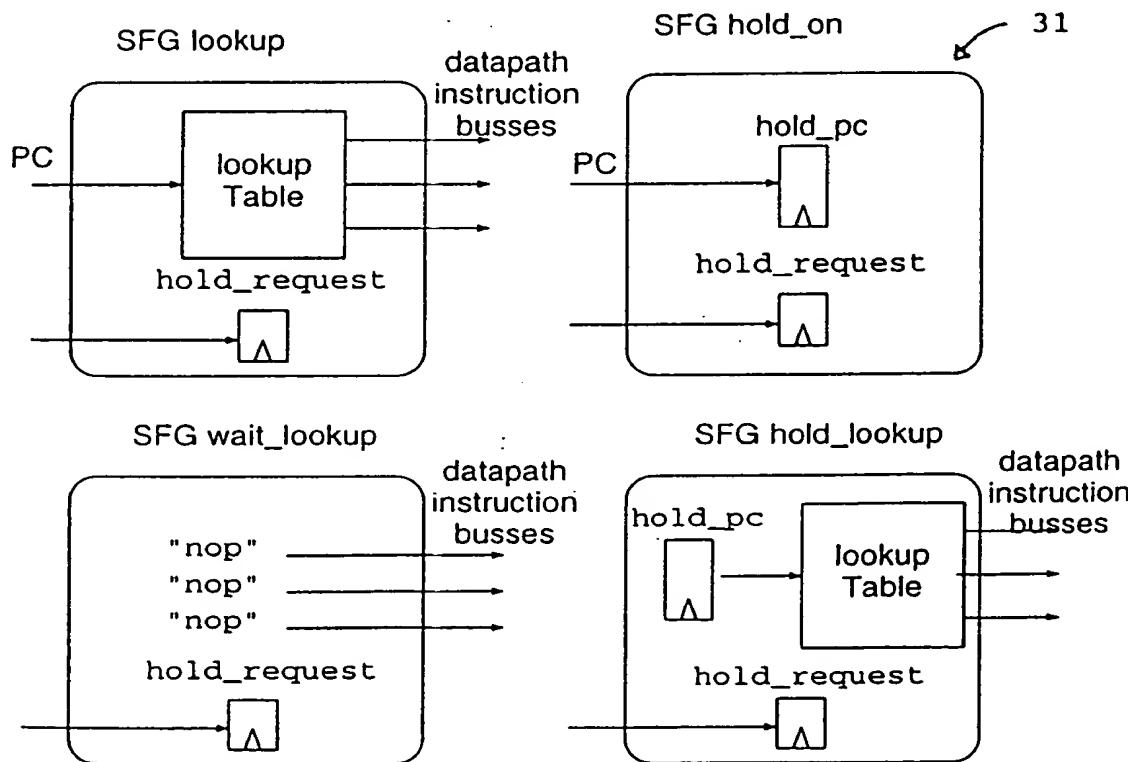
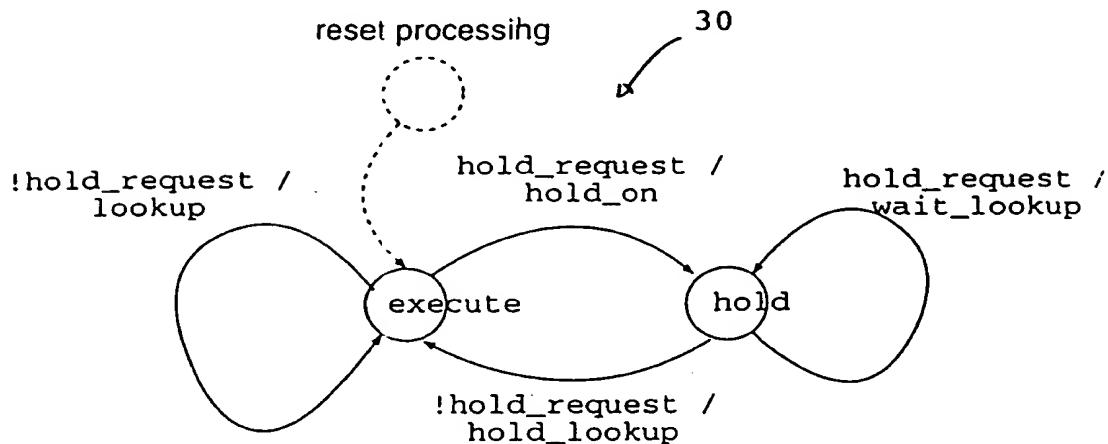


FIG. 15



15.

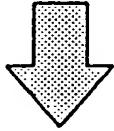
Sig Class

```
class sig {
    Value value;
    char *name;
public:
    sig(Value v);
    sig operator +(sig v);
    virtual Value simulate();
    virtual void gen_code(ostream &os);
};

sig sig::operator +(sig v) {
    sigadd s;
    add.left = &v;
    add.right = this;
    return add;
}

Value sig::simulate() {
    return value;
}

sig::gen_code(ostream &os) {
    os << name;
}
```



Derived Operator Class

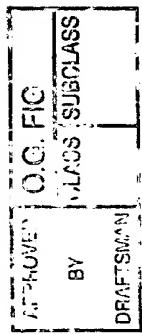
```
class sigadd : public sig {
    sig *left;
    sig *right;
public:
    Value simulate();
    void gen_code(ostream &os);
};

Value sigadd::simulate() {
    return left->eval() +
        right->eval();
}

sigadd::gen_code(ostream &os) {
    os << left->cg()
    << " + "
    << right->cg();
}
```

FIG. 16

AUG 23 2002



sig a, b, c, d;
 b = a + 3;
 d = (b + c) << 3;

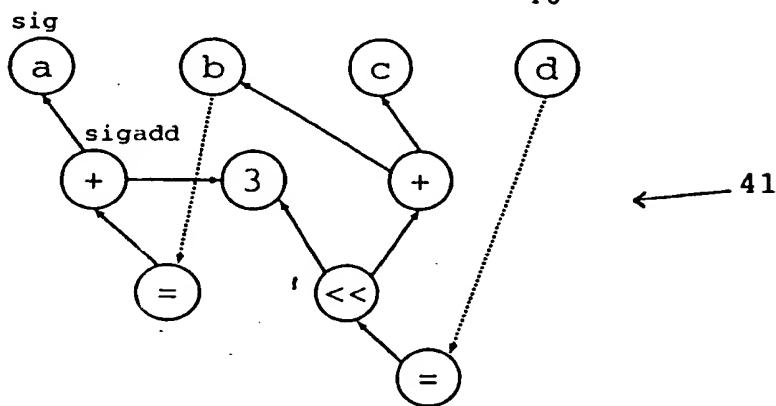
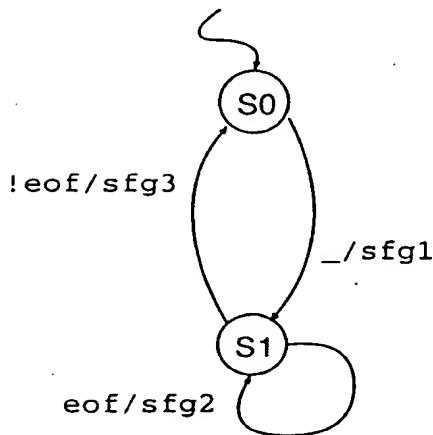


FIG. 17



```
fsm f;
initial s0;
state s1;

s0 << always << sfg1 << s1;
s1 << cnd(eof) << sfg2 << s1;
s1 << !cnd(eof) << sfg3 << s0;
```

FIG. 18

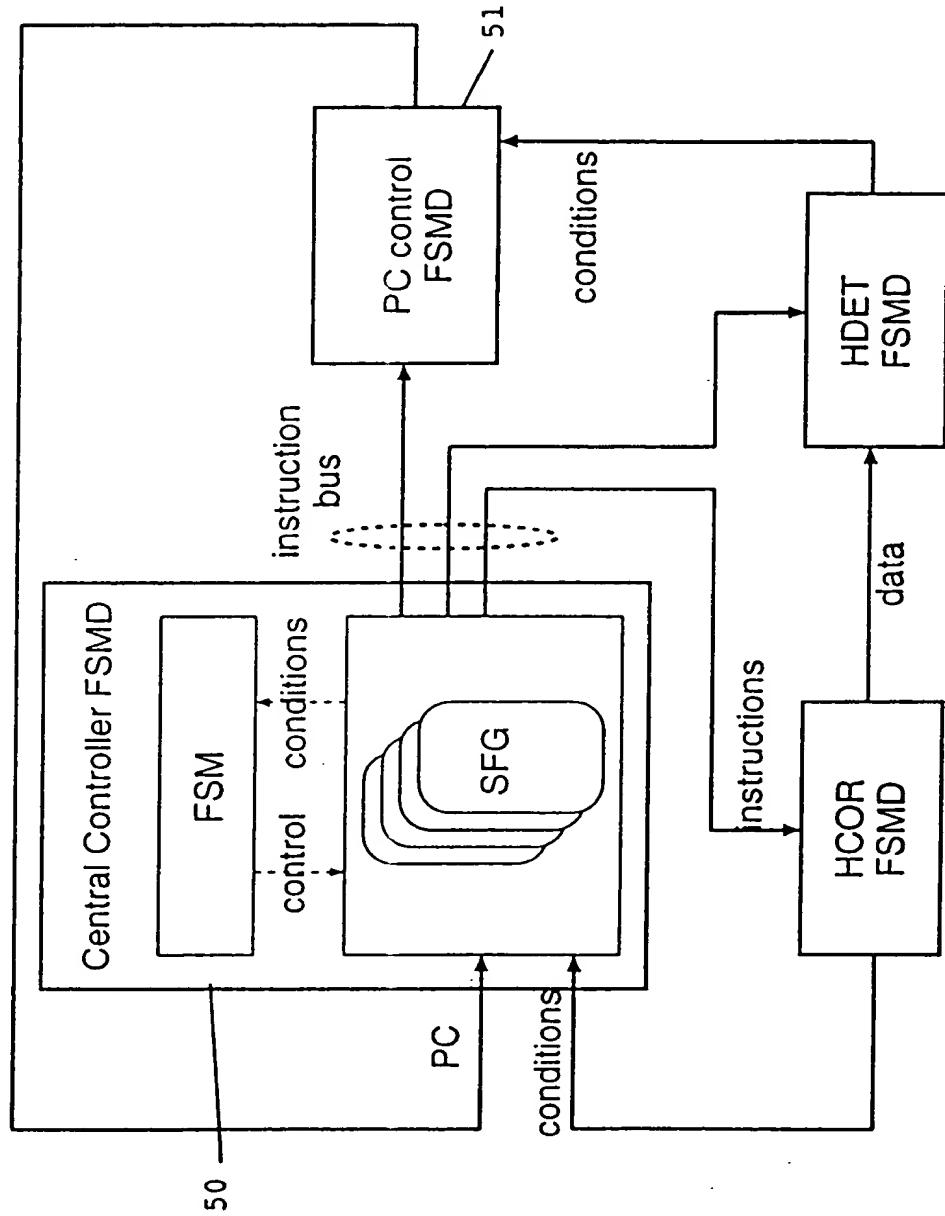
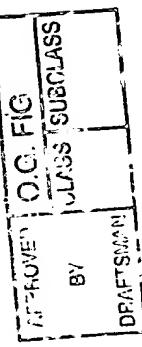


FIG. 19

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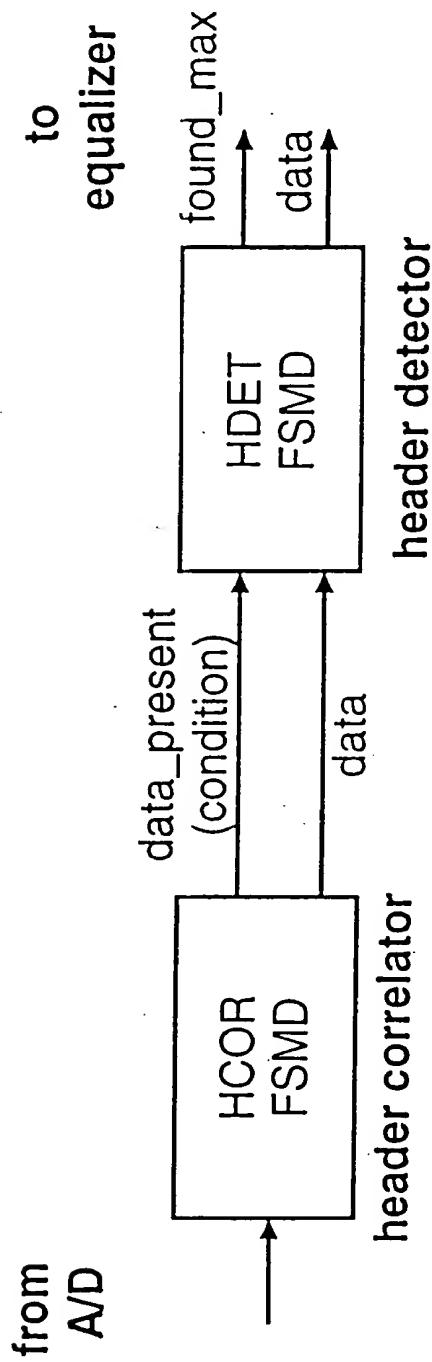
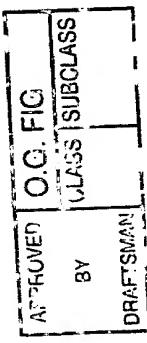


FIG. 20

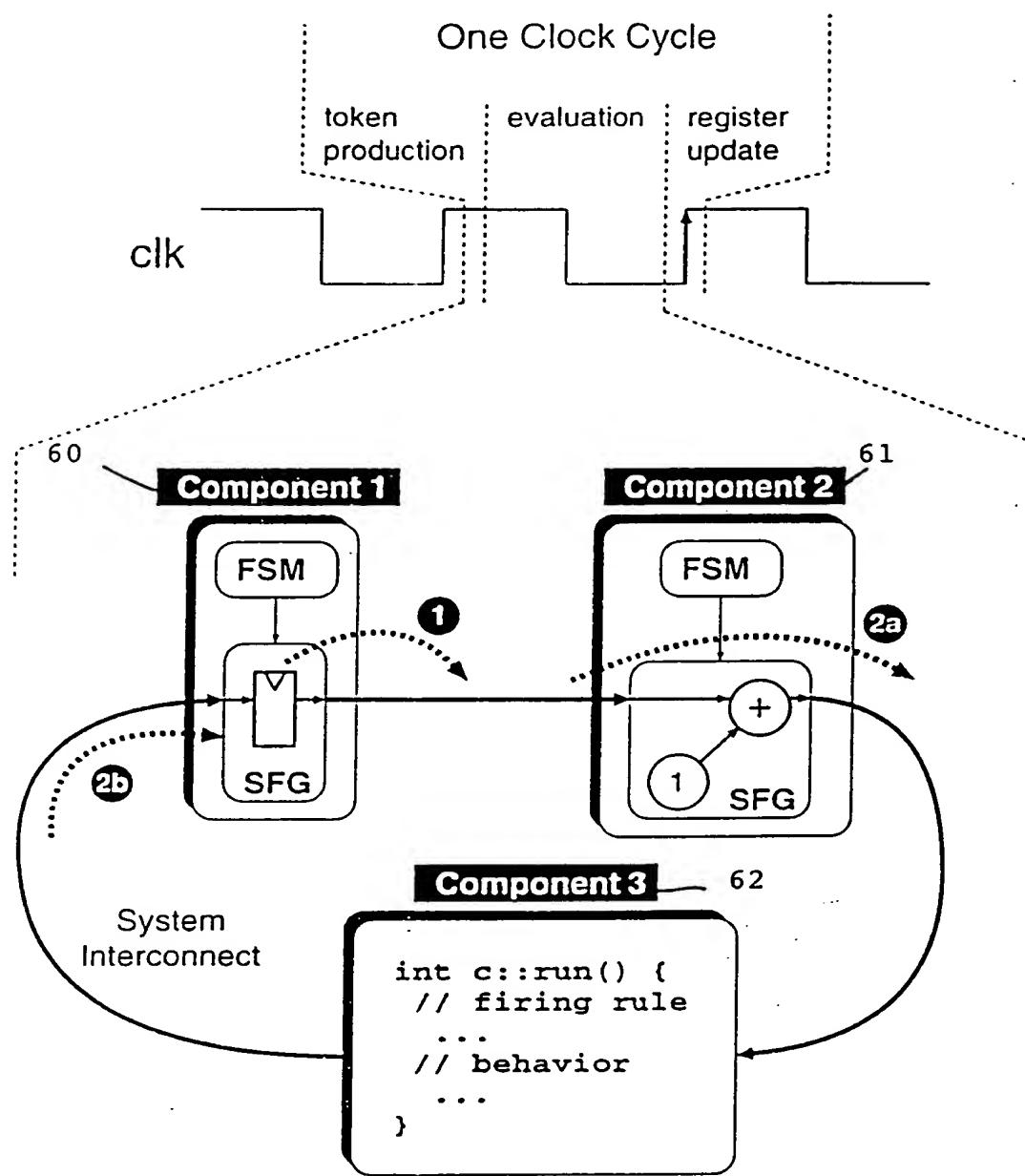
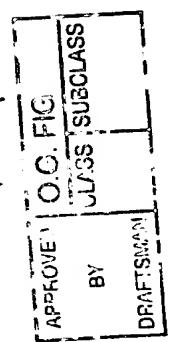


FIG. 21



Schaumont et al.

App. No.: 09/873,553

Atty Docket: IMEC65.1CPICT

APPROVED	O.C. FIG
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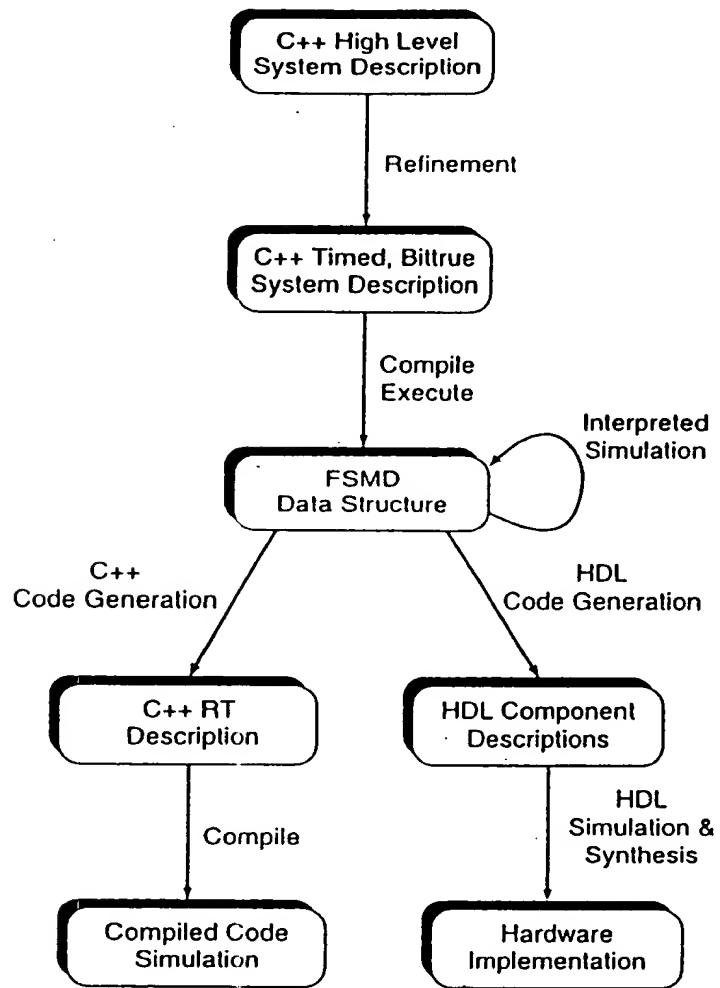


FIG. 22

A DESIGN APPARATUS AND A METHOD FOR GENERATING AN IMPLEMENTABLE DESCRIPTION OF A DIGITAL SYSTEM
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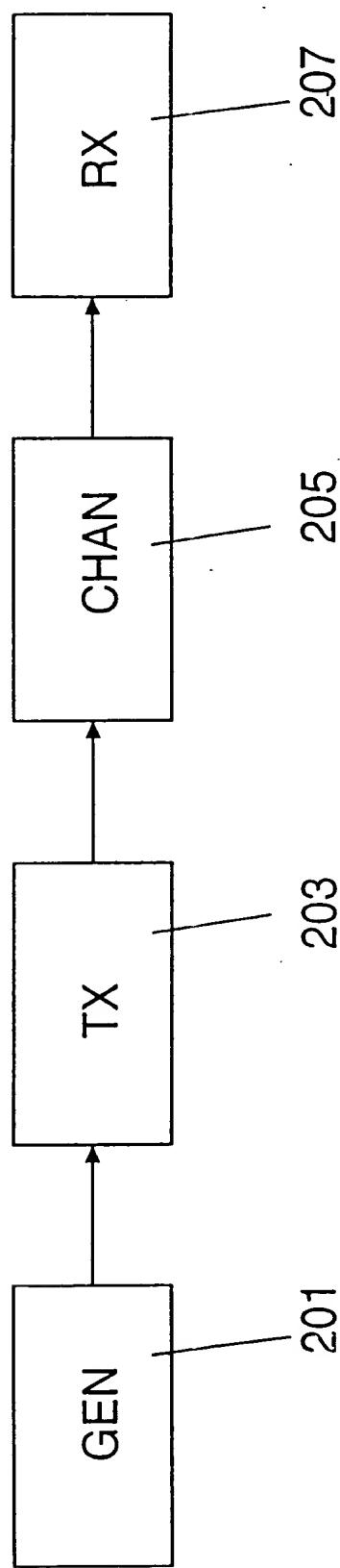
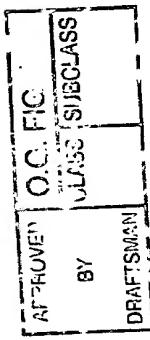


Figure 23.

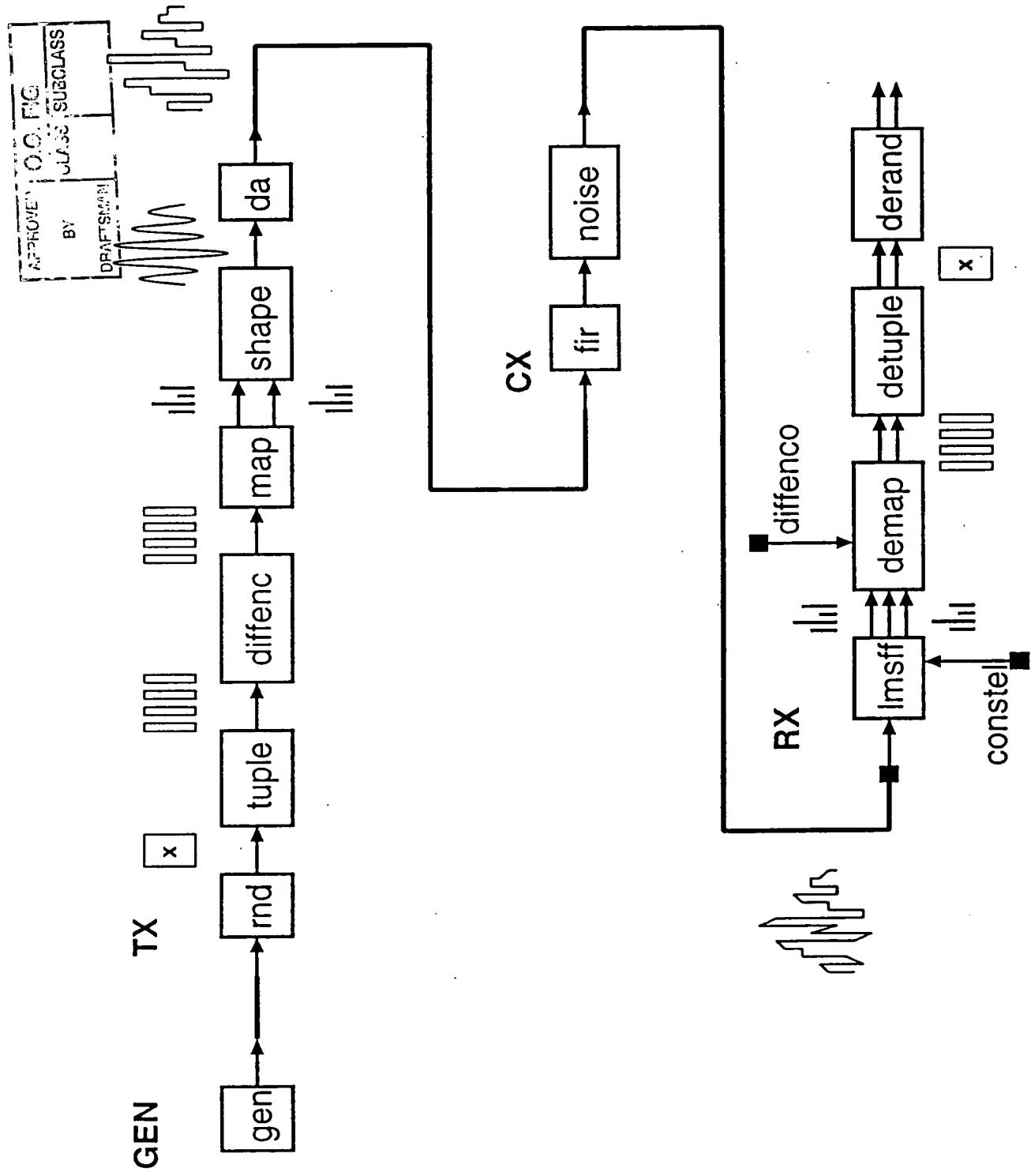


Figure 24.